

# SUPER TOTE™

## ASSEMBLY INSTRUCTIONS



### REQUIRED ITEMS

#### Adhesives & Building Supplies

- Great Planes® Pro™ aliphatic resin (wood glue) (2 oz. [60g], GPMR6160)
- 1/2 oz. [15g] Medium Pro CA+ (GPMR6007)
- 1 oz. [30g] Thick Pro CA- (GPMR6014)
- CA applicator tips (HCAR3780)
- Pro 30-minute epoxy (GPMR6047)
- Pro 6-minute epoxy (GPMR6045)
- 2 oz. [60g] Foam Safe CA Activator (GPMR6035)
- Great Planes Easy-Touch hand sander (GPMR6169)
- Easy-Touch™ sandpaper assortment (GPMR6189)
- Drill bits: 5/64" [2mm], 7-64" [2.8mm], 5/32 [4mm], 3/8" [9.5mm]
- Masking tape (TOPR8018)
- 18" flexible steel rule (HCAR0460)
- 6" steel pocket rule (found at most hardware stores)
- Builder's Triangle Set (HCAR0480)
- #11 hobby knife (HCAR0105)
- #11 blades (5-pack, HCAR0211)
- 1" [25.4mm] Steel C-clamp (you'll need 4)
- 24" [610mm] bar clamp
- Weighted bags (use steel shot or BBs)
- Rotary tool such as Dremel
- Rotary tool reinforced cut-off wheel (GPMR8200)
- Sanding drum – coarse (DRER0965)
- Plan Protector 25' [7.6m] roll (GPMR6167)
- Latex foam rubber 1/2" [13mm] (HCAQ1050)
- Denatured alcohol
- Hobbico Retractable Fabric Tape Measure (HCAR0478)

#### Finishing Supplies

- For a painted surface, we recommend using any fuel-proof spray paint such as Top Flite® LustreKote. Most household spray paints available at your local hardware store will also work, but be sure to test the paint to make sure it is indeed fuel-proof.

*For a bare-wood finish, we recommend the following options:*

- Great Planes Finishing Resin (GPMR6049)  
OR
- Your choice of oil-based polyurethane varnish
- Standard household paint brush 1" – 1-1/2" [25-38mm]
- HobbyLite™ balsa colored wood filler (HCAR3401)

## FIELD EQUIPMENT SUGGESTIONS

This is a list of items you may want to order to outfit your field box.

### Flightline Equipment

- Hobbico® Deluxe Power Panel II (HCAP0302)
- Hot Shot™ 2 standard NiCd glo-starter (HCAP2520)
- TorqMaster™ 180 electric starter (HCAP3305)
- TorqMaster 12V, 7A sealed lead-acid battery (HCAP0800)
- Hobbico Expanded-Scale Voltmeter Mk. II (HCAP0351)
- GloBee™ IntelliTach™ (GLBP0111)
- Hobbico Top Fueler™ Mk. III (HCAP3107)
- Filling Station fuel fitting set (GPMP4155)
- Recoil fuel tubing 5' [1.5m] (HCAP2200)
- Dave Brown Pour-N-Pump fuel can & pump (DAVP2570)
- Futaba® J charge leads Tx/Rx (HCAP0101)
- Glo-starter charge leads (all) (HCAP0107)
- Hobbico Quick Field Charger Mk. II (HCAP0290)
- Triton 2™ DC computer charger (GPMM3153)

### Adhesives & Oils

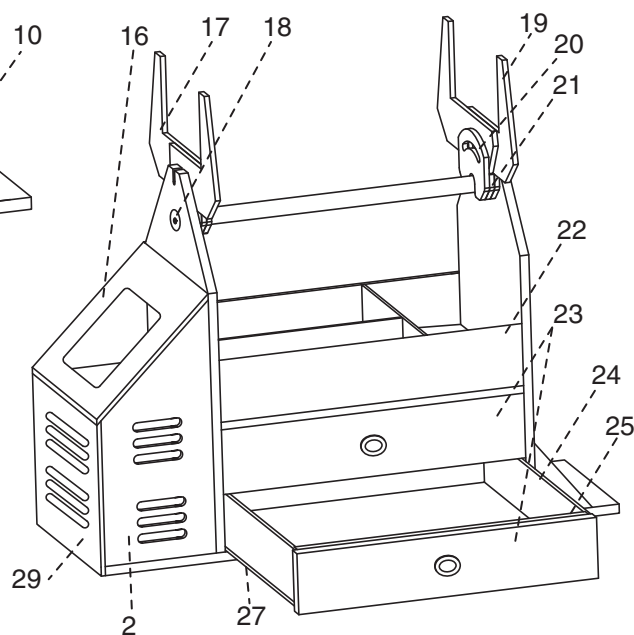
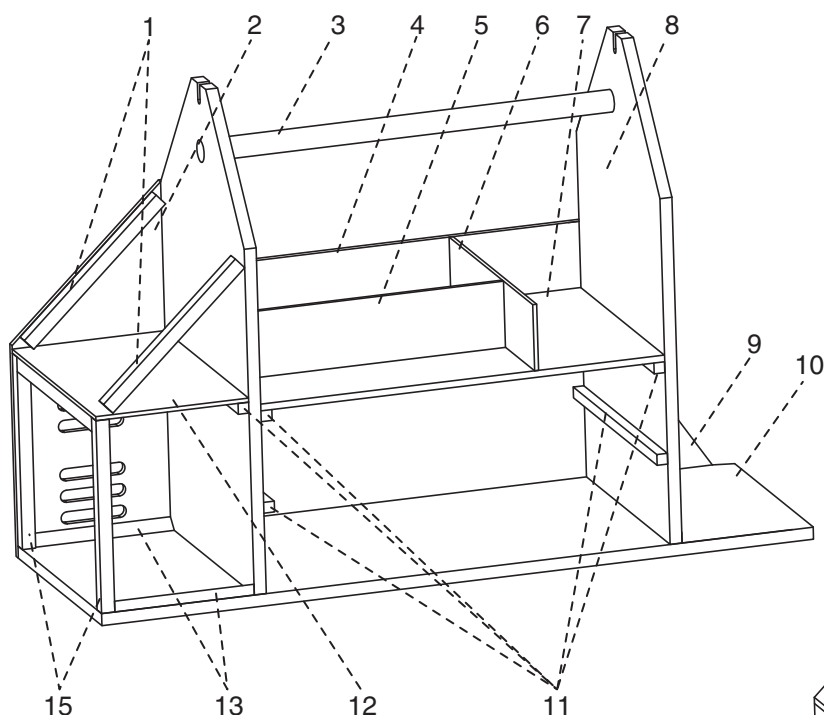
- 1/2 oz. [15g] Thin Pro CA (GPMR6001)
- 1/2 oz. [15g] Medium Pro CA+ (GPMR6007)
- 2 oz. [60g] Foam Safe CA Activator (GPMR6035)
- Great Planes® Pro Threadlocker (GPMR6060)
- After-run oil 2oz [60g] (HCAP3000)

### Tools

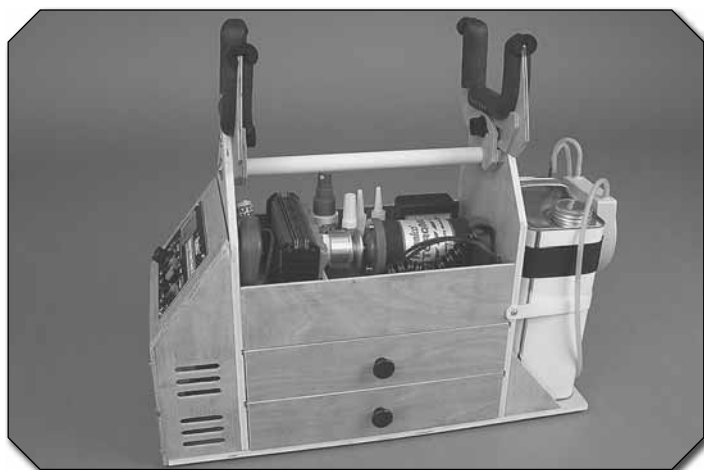
- 4-way glow plug wrench (HCAP2550)
- #11 hobby knife (HCAR0105)
- Standard & metric ball-end hex drivers (HCAR0520, HCAR0521)
- Straight pliers w/ cutter (CNSR0452)
- Flat-nosed pliers 5" [127mm] (EXLR5570)
- Hobbico heavy-duty diagonal cutter 7" (HCAR0627)
- Curved-tip hemostat (BRUR1303)
- Screwdriver set
- 4-in-1 installation tool (GPMR8035)
- 4-step std prop reamer (GPMQ5005)
- Finger-tip prop balancer (GPMQ5000)
- Chicken stick (HCAP3335)
- 7x4x1" parts box (HCAR3005)

### Spares

- 1/4 – 20 x 1" nylon wing bolt (replacement part for cradle) (GPMA2389)
- O.S. #8 std long glow plug (OSMG2691)
- Segmented lead weights 6oz [170g] (GPMQ4485)
- Tie wraps, 4" [102mm] (TRIC6277)
- Aluminum fuel line plugs/dots (GPMQ4166)
- #64 rubber bands (1/4 lb [113g] box, HCAQ2020)
- Blenderm™ tape (DUBQ0916)

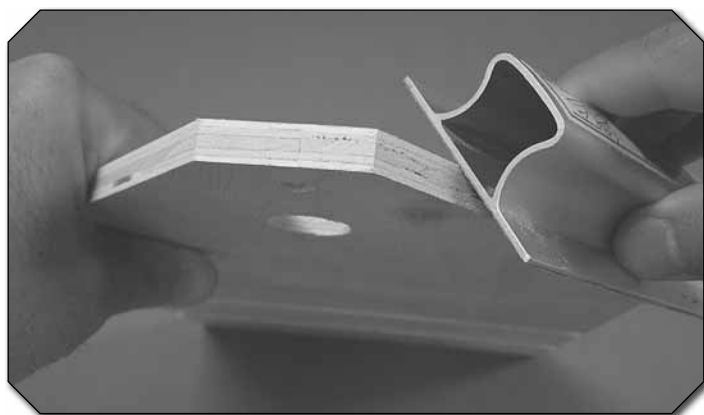


## PREPARE FOR ASSEMBLY



① 1. Decide on the type of glue that you will use to build your field box. You may use wood glue (aliphatic resin), CA, or epoxy to assemble your field box. For the strongest and most durable glue joints we recommend you use wood glue. To build the box you see here in the manual, we used wood glue for each joint and then we used evenly spaced drops of CA to hold each piece in alignment while the wood glue dried. If you prefer to use CA and accelerator to build the box, use only a light misting of accelerator (spray from about 9" [228mm] away). This prevents bubbling of the CA as it cures and makes a stronger joint.

② 2. Depending on the layout you choose, you may build your Super Tote with the power panel and battery on the left side or the right side. For this manual, we will show you how to build the box with the power panel and battery on the left. Decide on what's more comfortable for you.



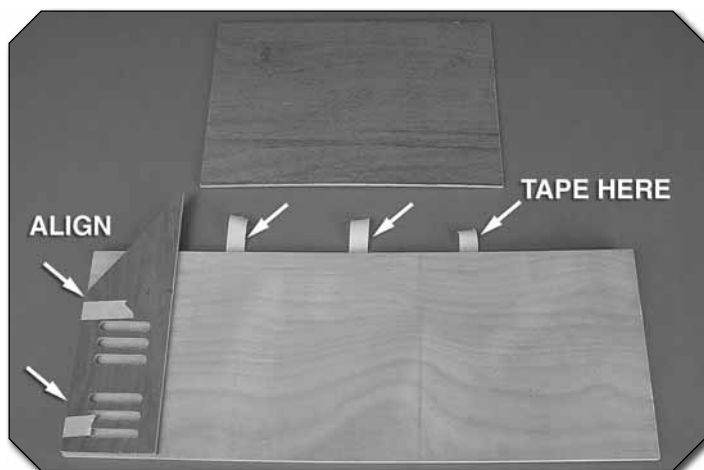
③ 3. Use a sanding block with some 150 grit sandpaper to smooth the surface of the wood. Sand and bevel the edges of the two uprights (part #8) and the base (part #10). Remember that time spent preparing the wood now will improve the final finish later. After you're done with the box, you will spend a bit more time sanding it for your final finish application. Rough-prepping the individual pieces now will save you a bit of time and effort later.

④ 4. Please refer to the numbered parts diagrams on the previous page to help you build this field box. Parts are numbered and show parts orientation.

## BUILD THE MAIN BOX



① 1. Install four 5/16" x 3/8" x 7" [8x10x187mm] hardwood rails in the channels provided in each of the two uprights (part #8). Glue these in place so that there is at least 13/64" [5mm] distance from the end of the rail to the edge of the upright on either side. Sand the rail down to size if this is not the case.



② 2. Lay one of the two battery box sides (part #2) onto the left side of the base (part #10). Align the edge as shown. Hold the battery box side in place using masking tape. This will help you align the left side upright. Place three pieces of masking tape under the base as shown.



◎ 3. Glue the **left side upright** to the base being careful not to get glue on the battery box side. Butt the back wall (part #4) up against the upright and glue it in place. Use the tape you applied in the last step to hold the back wall tightly up against the base. Apply a few more pieces of tape to hold the upright up against the back wall. Remove the battery box side now and wipe up the excess glue that squeezes out of the joints. Allow the glue to dry. To help hold all pieces in alignment, you can use a small drop of thick CA every 2" [51mm] and cure it with some CA accelerator.



◎ 4. Tape the front panel (part #22) to the base as shown. Butt the panel up against the left side upright.



◎ 5. Glue the **right side upright** to the base and the back wall using the front panel as a guide to help you position the upright. Wipe up any excess glue and use a few evenly-spaced drops of thick CA to tack the upright in place. Remove the front panel from the base. Clean up any excess glue. Tape the left upright to the back wall and let the glue dry.

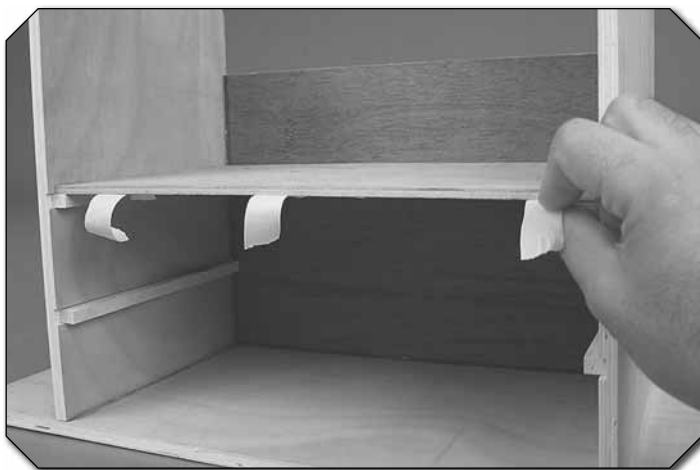


◎ 6. Run a bead of glue into all of the joints. Run your finger over the bead to remove the excess glue and smooth it into a fillet.

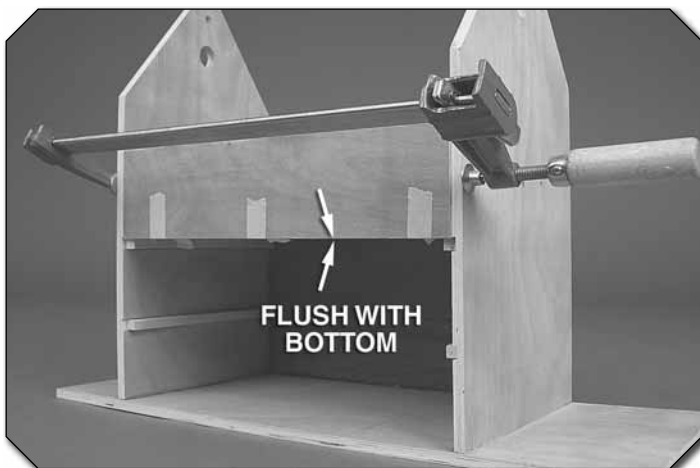


◎ 7. Glue the top tray floor (part #7) to the uprights, rails, and the back wall. Make sure that the uprights are square with the top tray floor and the back wall. Hold everything in position with two 1" [25.4mm] steel C-clamps. Allow the glue to dry.

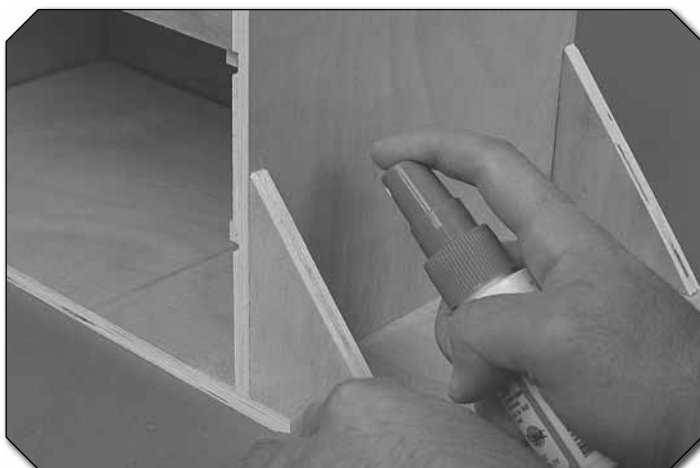




- ⊙ 8. Place three pieces of tape under the top tray floor.

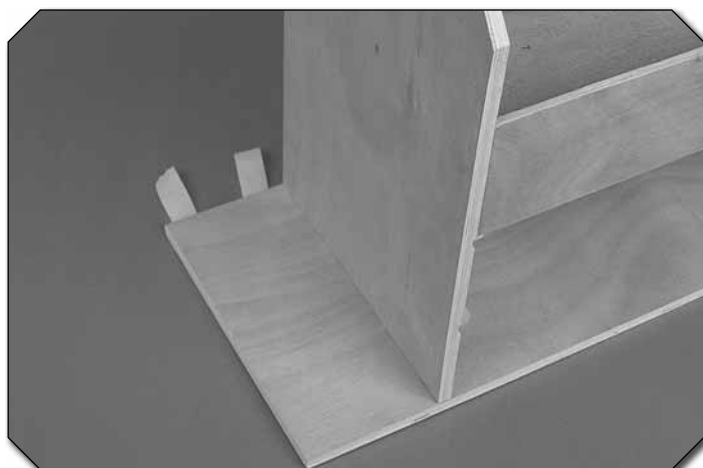


- ⊙ 9. Glue the front panel (part #22) in place so that the bottom edge of the panel sits flush with the bottom face of the top tray floor. Use a 24" [610mm] bar clamp to hold everything in alignment as the glue dries. If you do not have a bar clamp, you may use long pieces of masking tape. Remove the clamps and tape after the glue is dry.



- ⊙ 10. Glue the two fuel tank tray gussets (part #9) in the locations shown. Align each gusset so that it is flush with the edge of the base and upright. **Note:** The tall side of the gusset is glued to the upright. Place a drop of thick CA on the back side of the gussets at the horizontal joint and the vertical joint to hold the gusset tightly up against the corner as the glue dries.

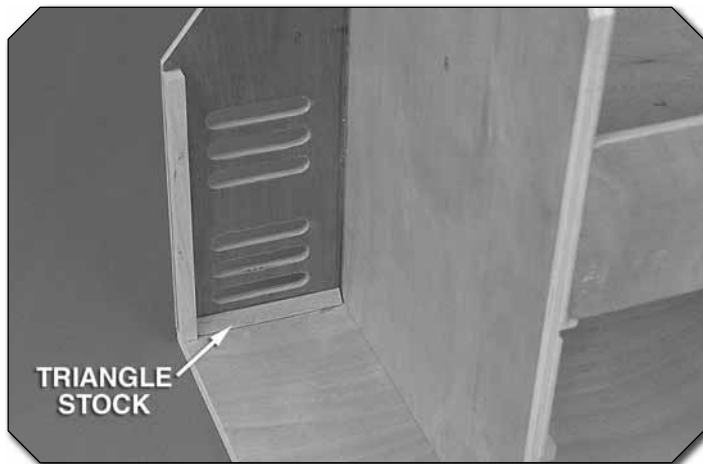
## BUILD THE BATTERY BOX



- ⊙ 1. Apply two pieces of tape from underneath the base.

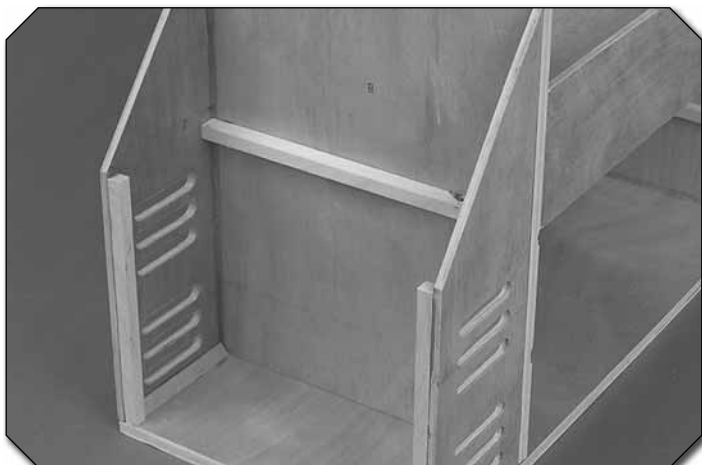


- ⊙ ⊙ 2. Glue one battery box side (part #2) to the base and the left side upright so that the edges sit along the top face of the base and the left face of the upright. Tape the battery box side securely to the base and upright. Remove the tape after the glue dries.



- ⊙ ⊙ 3. Glue one 5/16" x 5/16" x 5-3/4" [8x8x146mm] hardwood stick to the battery box side so that the edge of the stick sits flush with the edge of the battery box side. Glue one piece of 5/16" x 5/16" x 3" triangle stock in the fillet between the battery box side and the base.

- ⊙ 4. Repeat steps 1 through 3 for the other battery box side.



◎ 5. Use a pocket ruler to make a mark 5-3/4" [146mm] up from the base on the left upright. Make a mark at the corner of both battery box sides and the upright. Install the remaining 5/16" x 3/8" x 7" [8x10x187mm] hardwood rail onto the left side upright so that the top edge of the rail is 5-3/4" [146mm] from the base, or even with the marks you made.



◎ 6. Glue the battery shield (part #12) in place. Clamp or tape the battery box sides together. Apply a bead of glue to all joints.



◎ 7. Drill a hole in the battery shield to route the power panel wires through. Start with a 3/8" [9.5mm] drill bit and enlarge the hole with a Dremel® tool or equivalent rotary tool fitted with a sanding drum to enlarge the hole.



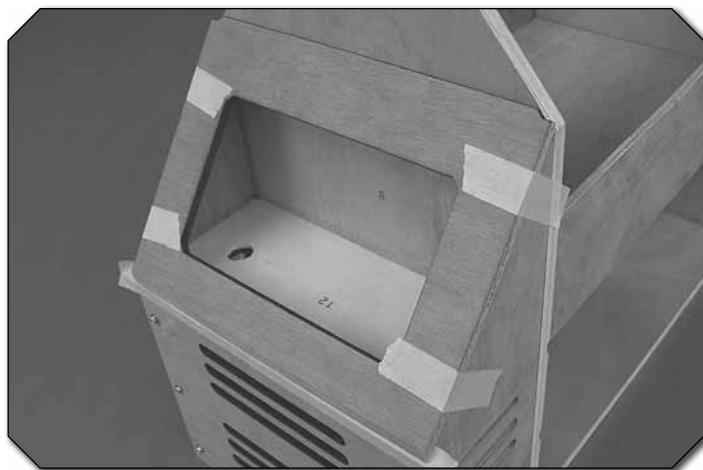
◎ 8. Fit the battery cover in place so that both sides of the cover are even with the battery box sides and the beveled edge sits as shown. Using a pencil, make a mark on the cover centered approximately over each hardwood rail. Do this for the left and the right side of the cover. Draw a faint line parallel with the edge of the cover all the way down to the bottom along the marks you made.



◎ 9. Tape the battery cover (part #29) in place so that the beveled edge of the cover is flush with the angled edge of the battery box sides. The battery cover is properly aligned if the power panel face plate sits flat against the beveled edge and the battery box sides.



⦿ 10. Drill six 5/64" [2mm] evenly spaced holes along the line you made earlier. If you will be clear-coating or staining your field box, erase or sand off the pencil marks you made. Install six 10mm sheet metal screws using six small flat washers.



⦿ 13. Apply a bead of glue to the rails and set the face plate into position. When you're satisfied with the fit, hold it in place with a few strips of masking tape. Allow the glue to dry.



⦿ 11. Test-fit your power panel and make sure that it fits in the cutout of the power panel face plate (part #16). If not, use your rotary tool to enlarge the opening. Be careful not to remove too much material.



⦿ 14. Remove the battery cover and wick one drop of thin CA into each of the screw holes in the hardwood rails.



⦿ 12. Place a long piece of masking tape along the top edge of the battery cover. This will keep the power panel cover from being glued to the battery cover. Glue the two 5/16" x 5/16" x 5-1/8" [8x8x130mm] sticks to the battery box sides so that they are flush with the tops of the sides. Glue one stick on each side.

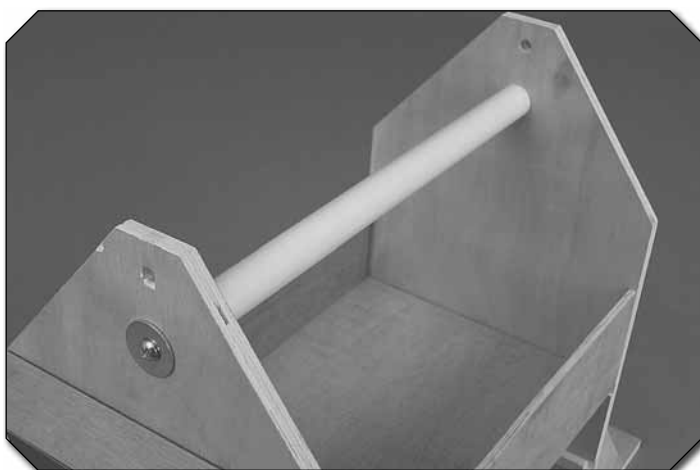


⦿ 15. Route your power panel's wires through the hole you drilled in the battery shield and fit the power panel to the face plate. Drill four 5/64" [2mm] holes. Use four 10mm sheet metal screws with four small flat washers to attach your power panel. Remember to harden the screw holes with a drop of thin CA.





⦿ 16. Fit your 12V lead-acid battery in place. Use folded-up pieces of latex foam to cushion the battery and keep it from sliding around. Install the battery cover.

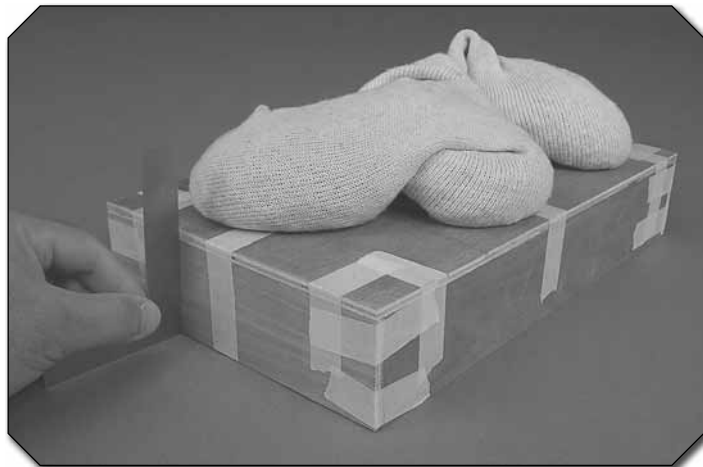
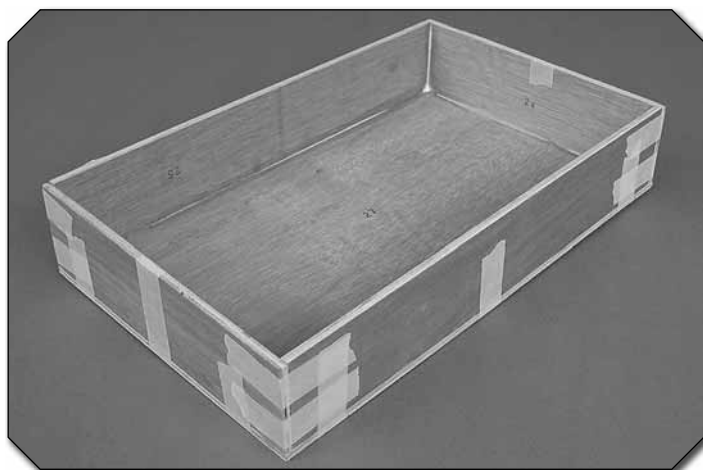


⦿ 17. Install the handle using two 20mm pan-head phillips sheet metal screws and two 1" [25.4mm] O.D. large-area washers. Remove the screws and harden the screw holes with thin CA. Reinstall the screws and washers.

## BUILD THE DRAWERS



⦿ ⦿ 1. Set the drawer base (part #27) on a flat surface. If the base is slightly warped, use a weighted bag to hold it flat as you build. Glue one drawer side (part #24) to the left side of the base so that the side sits atop the base. Tape it in position. Glue the drawer back (part #25) to the side and base. Tape everything together and set the drawer on a flat surface. Place a weighted bag (or bags) on the base and use a builder's triangle or a builder's square to make sure everything is square. **Note:** Both drawers are identical.



⦿ ⦿ 2. Glue the drawer front (part #25 again) and the other drawer side (part #24) to the base. Tape all of the joints tightly together. Flip the box over and set weight on the

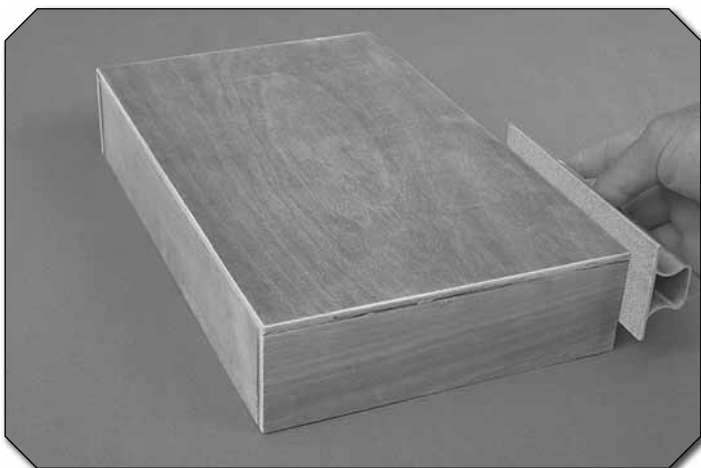


base to take out any warping. Make sure that the tape stays stuck and that all sides are tightly joined. Allow the glue to fully cure.

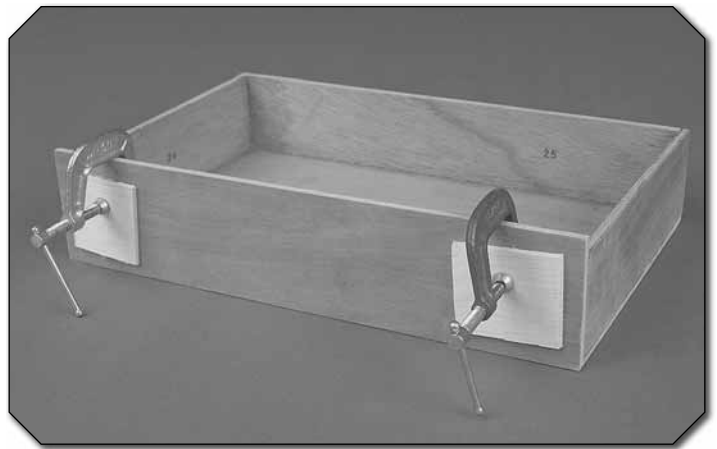
◎ 3. While you're waiting, repeat steps 1 and 2 to build the other drawer.



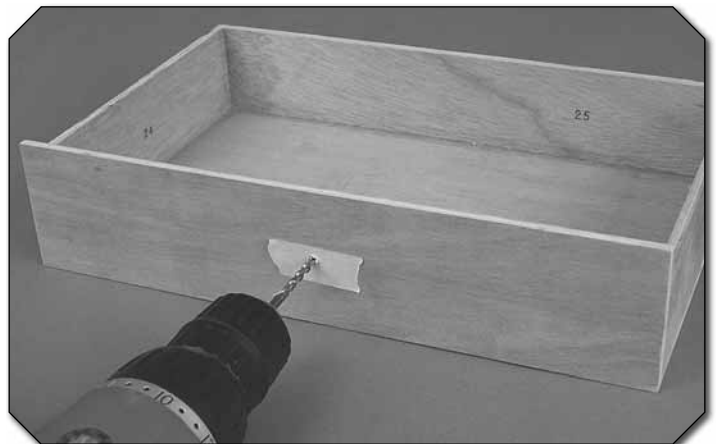
◎ 4. After the drawers are fully cured, remove the masking tape and set the drawers upside-down on your work surface. If the drawers are still warped, spray a light mist of water on the wood (both sides). Prop up one corner of the drawer opposite the direction of twist. This removes the twist by twisting the drawer slightly in the opposite direction. A couple of coins stacked together work well. Set weight on the base to hold the drawer down. Let the wood dry overnight like this.



◎ 5. When your drawers are straight and fully cured, sand all edges and sides so that they sit flush with one another.



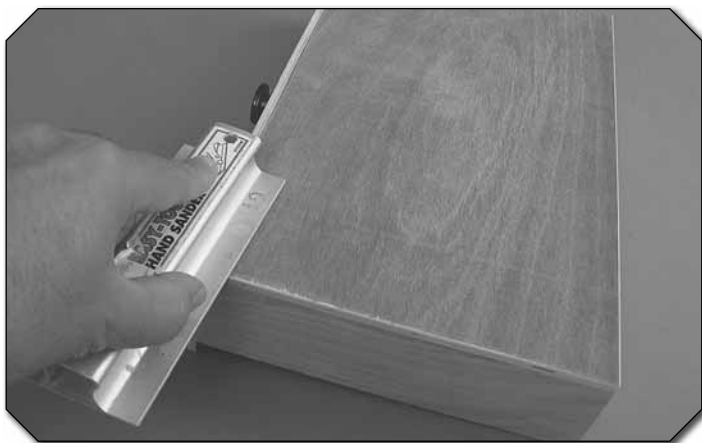
◎ ◎ 6. Glue the drawer face (part #23) onto each drawer so that the bottom edge is aligned flush with the bottom edge of the base and the side edges are aligned with the drawer sides. Clamp on the face using your 1" [25.4mm] steel clamps. Place a piece of scrap wood under the jaws of the clamps to prevent damage to the drawer face.



◎ ◎ 7. Make a pencil mark along each side edge of the drawer face 1-1/4" [32mm] up from the bottom edge of the face. Align your ruler with these marks and make a single mark in the center of the drawer. Drill a 5/32" [4mm] hole at this mark. **Hint:** Place a piece of masking tape over the mark to avoid damaging the wood.



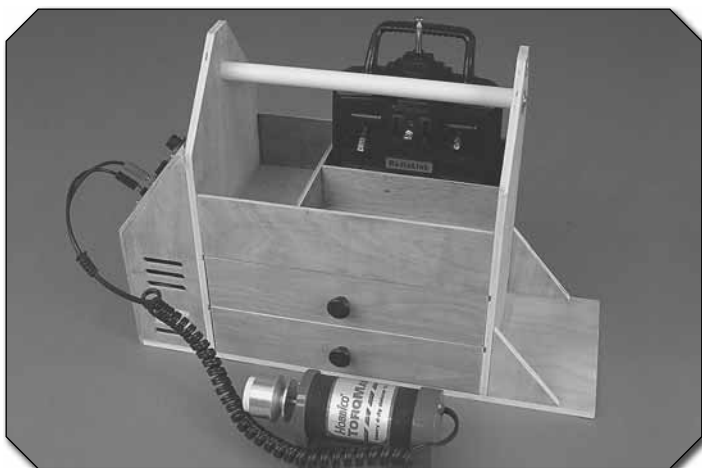
◎ ◎ 8. Locate the parts shown above. You should have two plastic knobs, two flat washers, and two 20mm sheet metal screws. Install the knob.



- ⦿ 9. Turn the drawer over and sand the bottom edge of the drawer face panel flush with the base of the drawer.
- ⦿ 10. Repeat steps 6 through 9 for the other drawer.



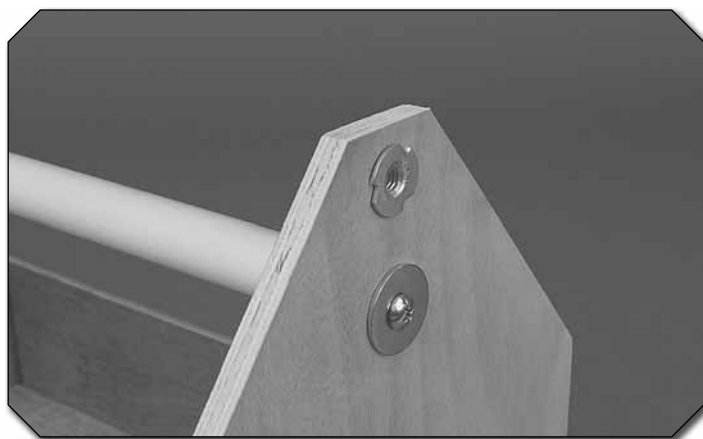
- ⦿ 11. Check the fit and operation of both drawers. Please realize that there might still be a bit of a twist in each drawer which may affect operation, but with weight in the drawer the drawer should straighten itself out and the gaps between the panels should line up. Sand the edges of the drawer faces to create an evenly spaced gap all the way between each drawer.



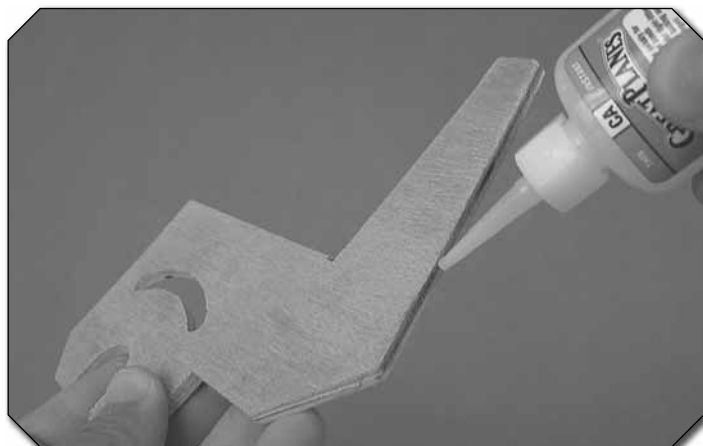
- ⦿ 12. Depending on how you care to arrange your flight box, install the upper tray dividers (parts 5&6). Fit your starter, transmitter, and any other gear in the upper tray and mark the position of each divider. Use a jigsaw, coping saw, or your Dremel tool to make cutouts that fit your field gear.

## INSTALL THE CRADLES

This section details the installation of the optional adjustable fuselage cradles. If you want to use these cradles on your field box, follow the steps detailed in this section. If you don't want to use them, skip to section **Apply Your Choice of Finish**.



- ⦿ 1. Install a blind nut in the pre-drilled hole in each of the uprights from the outside. Tap it in place with a hammer using a block of wood on the other side of the upright to help you hold the box in position as you install the blind nut.

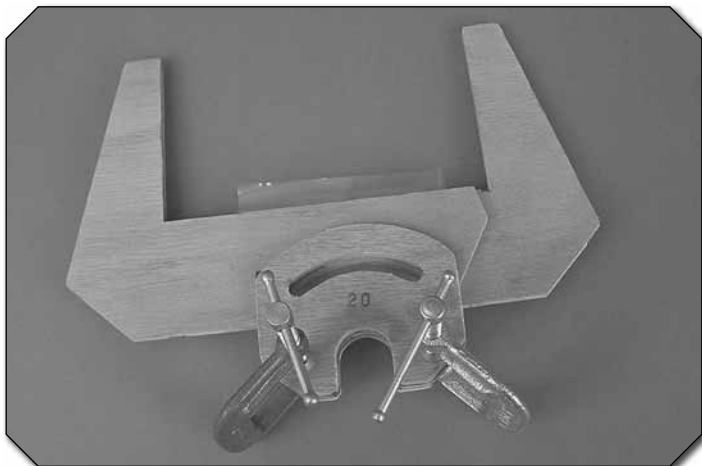
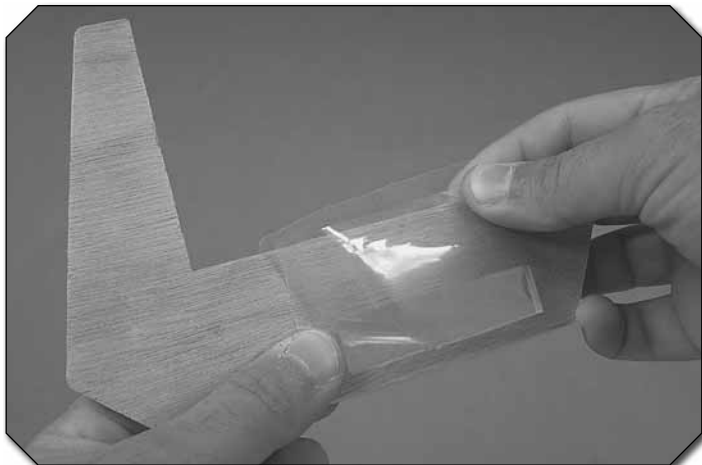


- ⦿ 2. Wick some thin CA into the end-grain of the plywood cradle arms (parts 17 & 19). This will make them stronger.

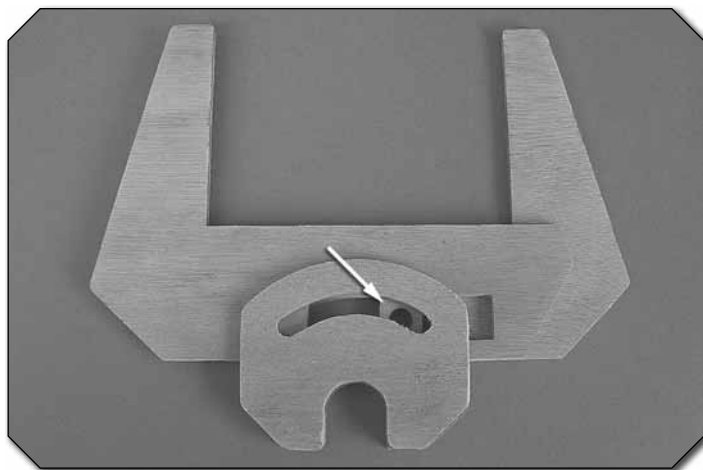
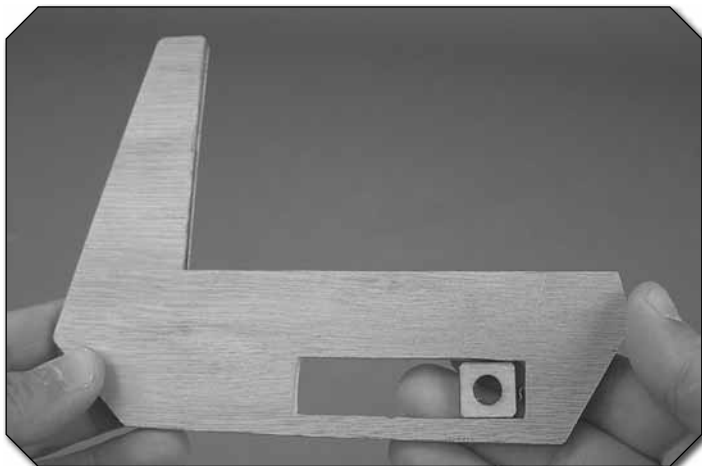


- ⦿ 3. Glue cradle spacer 21 onto cradle arm 19. Be careful to align the edges and the semi-circular cutouts. Make a **left**

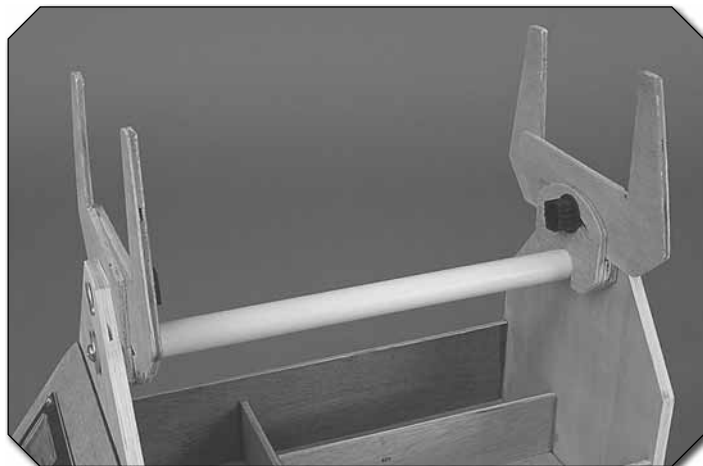
and a **right** side. **Hint:** Wood glue will allow you the working time needed to properly position the pieces.



◎ 4. Wrap a small piece of Great Planes® Plan Protector, MonoKote® backing, or waxed paper around cradle arm 17. Glue cradle retainer 20 onto cradle spacer 21 with cradle arm 17 positioned as shown. Align the cradle retainer so that all of the edges and the cutouts match. Use two clamps to hold the retainer onto the spacer while the glue dries. Repeat this step for the other cradle piece.

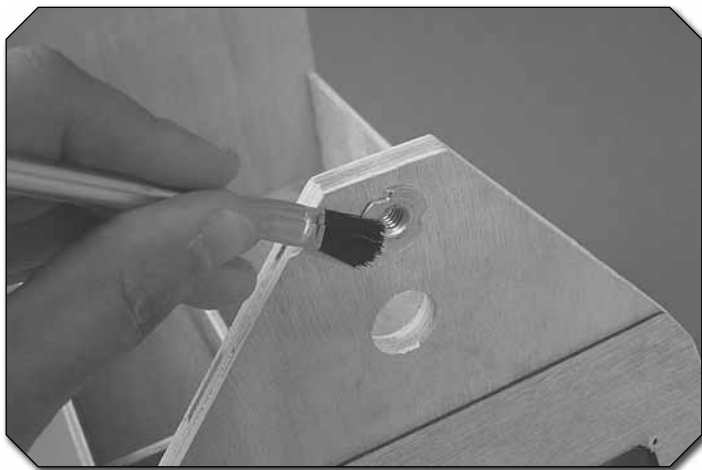


◎ 5. When the glue dries from the last step, remove the sliding cradle arms and discard the wax paper. **Without using glue**, place one 15mm square plywood piece inside each of the sliding arms. Slide the plywood square back and forth in the rectangular cutout and make sure that it slides freely. Sand the cutout to achieve smooth operation. Refit the sliding arm in the cradle assembly with the 15mm square in position.



◎ 6. Install each cradle assembly onto your field box so that the fixed cradle arm (part 19) sits up against the inside face of each upright. Install the 1/4-20 nylon wing bolt, making sure it passes through the 15mm square plywood piece. Test for smooth operation of the cradles. **Note:** Replacement bolts can be ordered using this part number - GPMA2389.





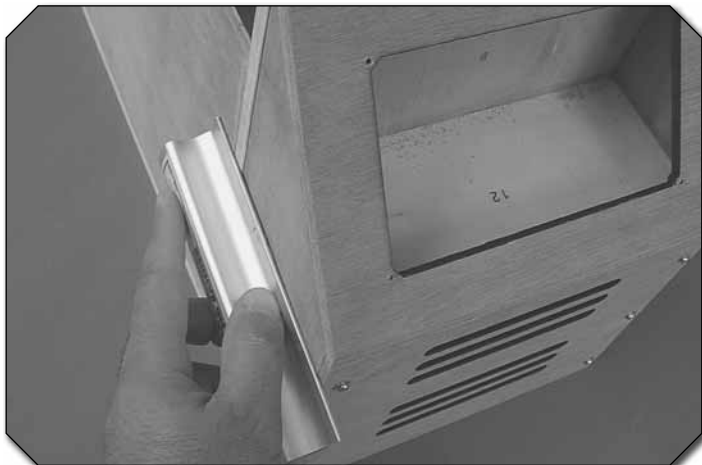
⦿ 7. Tighten down your cradles to fully seat the blind nuts. Remove the cradle assemblies. Mix up a batch of epoxy and apply a bead around the perimeter of each blind nut. This will help hold the blind nuts permanently to the uprights.

Please see steps 1 through 4 in the section **Finishing and Outfitting Your Field Box** to apply the foam cushion material to the cradle arms.

### APPLY YOUR CHOICE OF FINISH

Some kind of fuel-proof finish must now be applied to your field box to protect it from fuel, oil, dirt, and moisture. The finish can be a transparent one like wood stain, polyurethane, varnish, shellac, or it can be a painted one. Avoid acrylic or water-based finishes. These will not withstand prolonged contact with fuels or oils. If you choose to use paint, most household spray paints are OK, but please test the paint that you use to make sure that it is fuel-proof. Top Flite® LustreKote® spray paint is fuel-proof, durable, and is available in colors that match the MonoKote® finish applied to the models you have.

⦿ 1. Remove the cradles, power panel, drawers, plastic knobs, and carrying handle.



⦿ 2. Sand down any rough edges and make overlapping joints flush with their adjoining panels. Use suitable wood filler like Hobbico HobbyLite™ wood filler (HCAR3401)

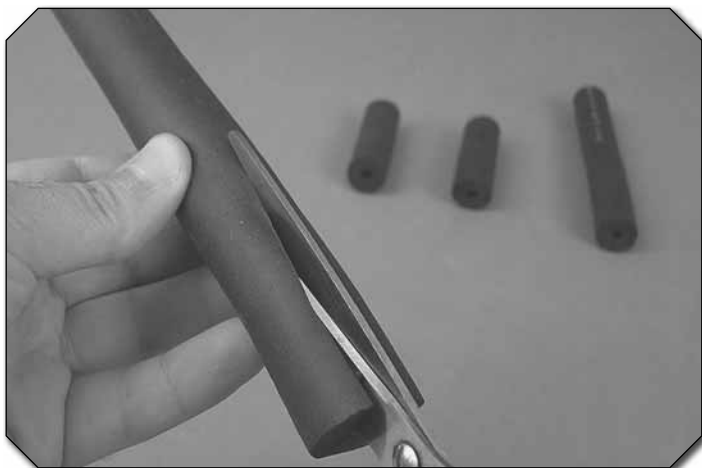
to fill any irregularities or gaps. If you stain or clear-coat your field box, several types of stainable filler putties are available to match your finish coat. Experiment with these to get the finish you desire. Switch to progressively finer grit sandpaper until you get the finish you desire. Start with 150 grit, move to 220 grit, and finish with 400 grit paper. Wipe down the finished parts with a tack rag or use an air compressor to completely blow off the dust on each part.



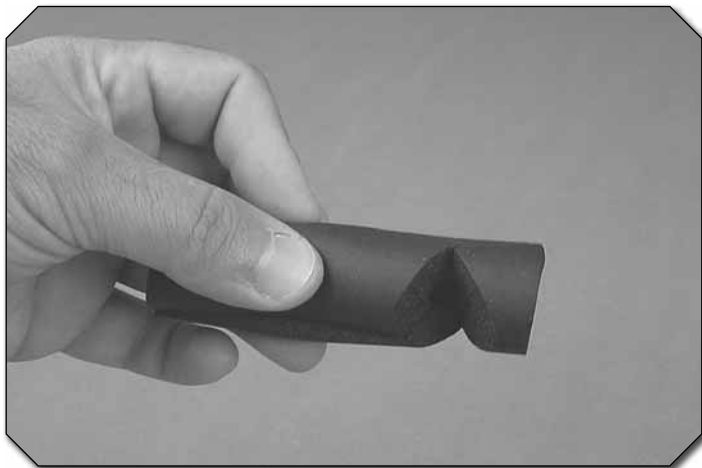
⦿ 3. Apply your choice of finish to the underside of the base first. Allow this to dry before turning over the box. Apply the remaining finish to the entire field box, the insides of the drawers, and the individual cradle parts. If you are painting your field box and you will be using light colors, prime the surface with either a special primer or white paint. Mask off the trim scheme of your choice and start by painting the lightest colors first. Apply the darkest colors last.

⦿ 4. Allow all pieces to fully dry before reassembly. **Note:** You may have to lightly re-sand the cradle pieces to achieve smooth operation.

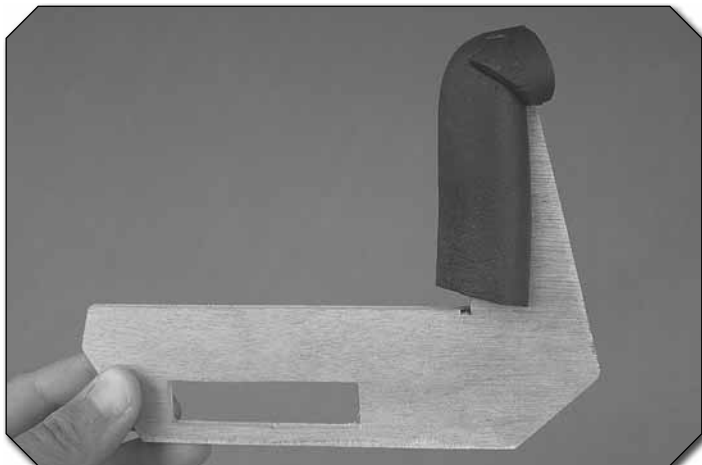
## FINISHING AND OUTFITTING YOUR FIELD BOX



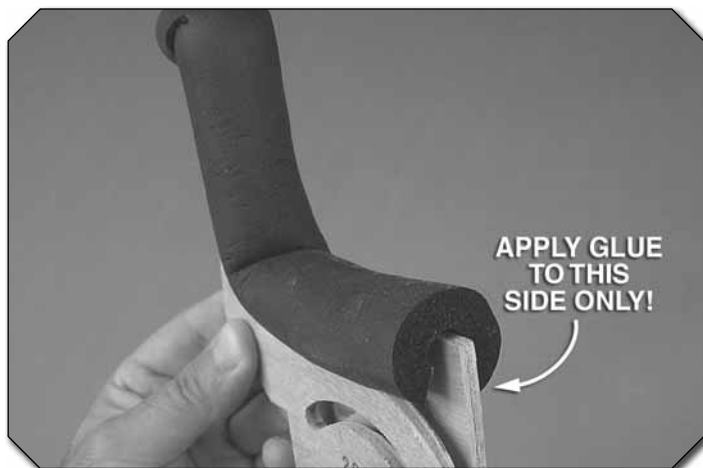
◎ 1. Cut two 3-1/2" [89mm] pieces and two 7-1/4" [184mm] pieces of foam tubing from the single strip provided. Use scissors to cut a slit in the tubing as shown.



◎ 2. Cut a notched section out of each foam piece so that the center of the notch is 3/4" [19.1mm] from one end of the tubing.



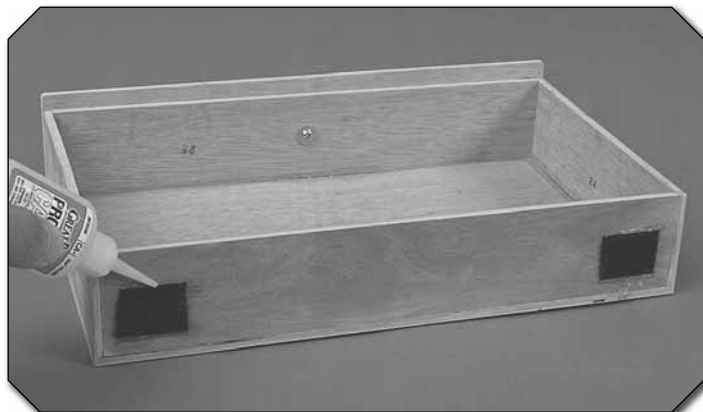
◎ 3. Glue the 3-1/2" [89mm] foam piece to the sliding cradle arm (part 17) as shown. The notched portion is at the top of the arm and allows the foam to conform to the bend.



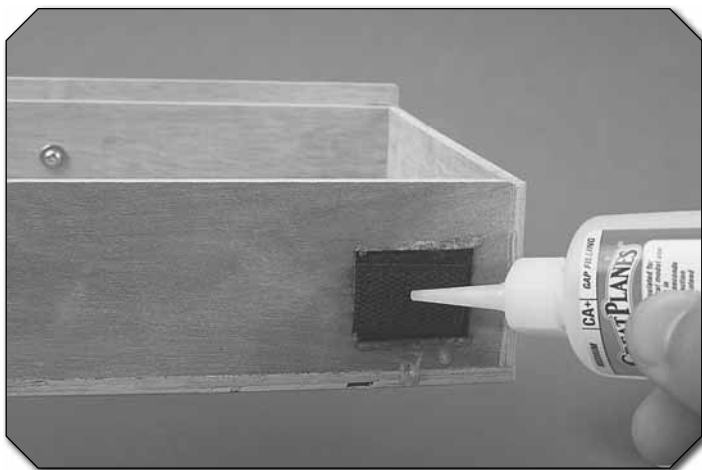
◎ 4. Glue the 7-1/4" [184mm] foam piece to the fixed cradle arm (part 19) as shown. Apply a bead of glue to the **back side** of the cradle arm (the side opposite the spacer and retainer). Do not glue the foam on the spacer/retainer side – the sliding arm must be free to travel.



◎ 5. Reassemble the cradle as shown. Don't forget to install the 15mm square piece! Reinstall the cradles to your field box.



◎ 6. Cut four 1" [25.4mm] pieces from the long strip of hook-and-loop material. Separate the hook side from the loop side of each piece. Use medium or thick CA to glue the loop side (fuzzy side) pieces to the back of each drawer. Glue each piece near the side edges as shown. Run a bead of CA along the top and bottom cloth sides of the loop strips. This will hold them on permanently. Spray the CA with CA accelerator to ensure that it fully cures before the next step.



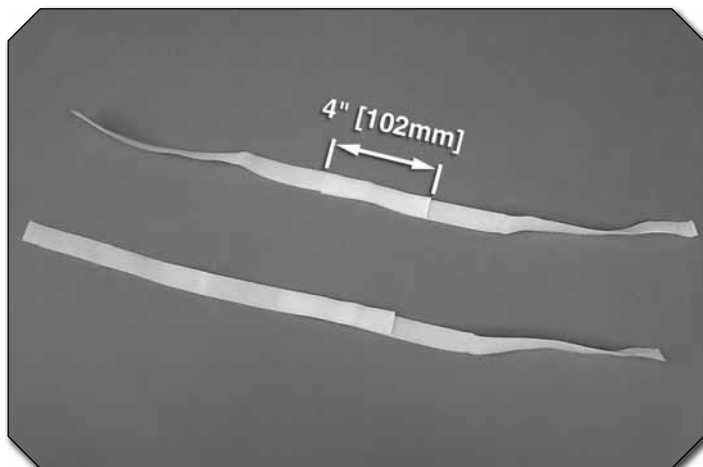
⑦ ⑦ 7. Attach the hook side to the loop side of each strip you glued in place. Working with one drawer now, place a drop of thick or medium CA on the back side of each hook fastener and proceed immediately to the next two steps – do not allow the CA to dry yet.



⑪ ⑪ 11. Reach back into the field box and thoroughly glue down the hook side fasteners with CA. Spray some CA accelerator onto the hook fasteners to thoroughly cure the CA.



⑧ ⑧ 8. Spray a generous amount of CA accelerator to the inside back wall of the box.

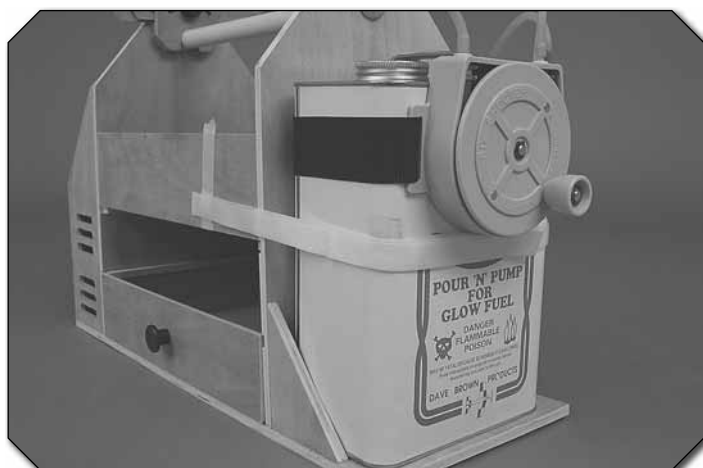


⑫ ⑫ 12. Locate the long strip of non-adhesive backed hook and loop fastener material. Cut it in half and separate the hook side from the loop side. Reattach the two sides so that they overlap each other by at least 4" [102mm].



⑨ ⑨ 9. Install the drawer in its proper slot so that the hook side fastener material contacts the back wall. Allow the CA about a minute to cure and then **gently** remove the drawer. **Hint:** Reach inside and use your finger to help separate the hook and loop sides as you gently pull out the drawer.

⑩ ⑩ 10. Repeat steps 7 through 9 for the other drawer.

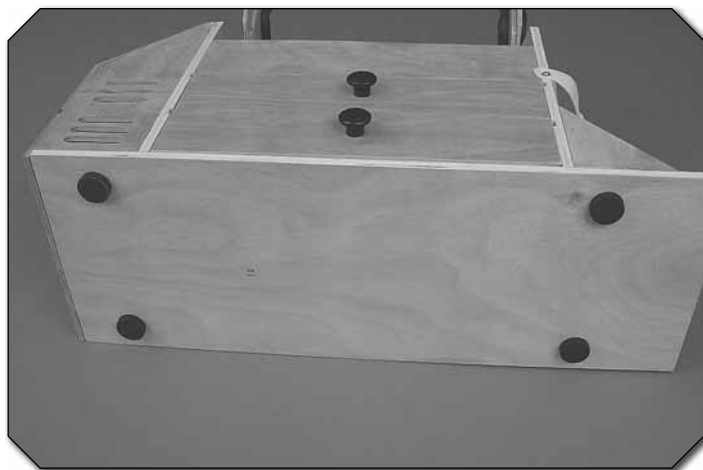


⑬ ⑬ 13. Place your fuel tank on the tank tray and stretch one of the straps you made across the upper part of the tank. Center the attached portion of the strap over the front of your tank and tape the ends of the strap to the field box.





⦿ 14. Drill one 5/64" [2mm] hole on each side of the hook and loop strap. Install the strap using two 10mm sheet metal screws and two small flat washers.



⦿ 17. After you're done with your field box, you can add feet (not included). Circular rubber, nylon, or felt bumpers are available at your local hardware store.



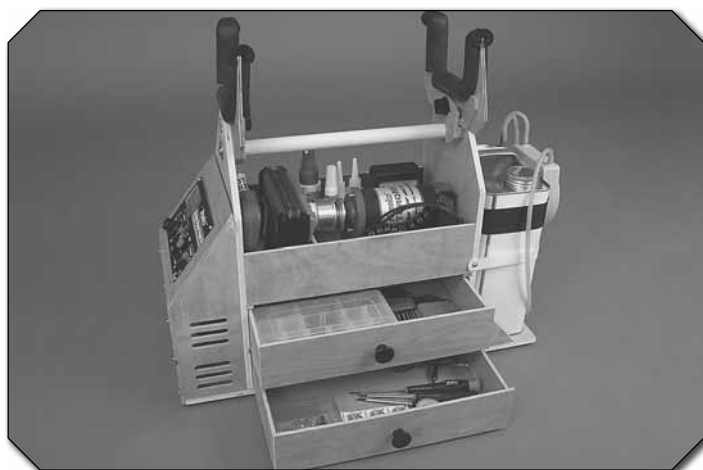
⦿ 15. Trim the ends of the strap. **Note:** Extra hook and loop material, screws, and washers are supplied if you want to use a second strap.



⦿ 18. As an added option you can use four #6 x 3/4" [19.1mm] sheet metal screws and washers (not supplied) to reinforce the uprights. Draw lines across the base centered with each upright. Drill four 7/64" [2.8mm] holes into the uprights and install the screws and washers.



⦿ 16. If you want, you can use a scrap piece of hook and loop material to hold your fueling line.



⦿ 19. Your field box is now ready to be outfitted with all of your tools and flight line equipment. Some items you may want to carry are listed in the section titled: Field Equipment Suggestions, at the start of this manual.

***Questions or comments? Please contact us at:***

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